

THE BUILDER,

NO. XLV.

SATURDAY, DECEMBER 16, 1843.

MESSRS. MOREWOOD'S PATENT GALVANIZED TIN PLATES.

ALL processes affecting that great staple commodity of our manufacturing interests, iron, and which, by consequence, have an intimate and important relation with building art, are to us processes of more than ordinary value, and demand more than an ordinary share of our attention. We have already exercised our minds in various speculations as to the future effects upon art which it may be presumed will be the result of the great mechanic's philosophical discovery of galvanizing metals. It opens to us a new world, and commerce bids high for the unlocking the yet hidden resources for her exercise, which only is to be accomplished by the hand of art. To be sure a large amount of applicability already exists in so far as the present uses of iron extend in plates for roofing, gutters, gall-pipes, chimney-tops, and the like; but we may freely calculate on a much wider field of action, when the familiarity of architects and builders with the process of manufacture is more satisfactorily established; and to do our part in bringing about this familiarity is the object of the present notice.

Messrs. Morewood have, by patent of the date of 4th May last, secured themselves to this new method of coating iron plates with tin, but the patent includes further privileges, which, in the words of the specification, may be recited as follows:—

"First, in subjecting the metals to be coated to 'a precipitation of tin, and then submitting the same to molten metal'; second, 'in causing sheets of metal, or other suitable surfaces thereof, to pass between rollers in contact with metal kept molten in a suitable pot or vessel'; third, 'in causing sheets of metal to be passed under a bar placed below the surface of the molten metal'; and, fourth, 'in the application of oil or fatty matter in combination with chloride of zinc and sal-ammoniac, or either of them as a flux, on the surface of molten metal when coating with molten metal, as tin, or an alloy of tin and lead.'

However, it is with the patent as far as it is allied with building commerce that we are drawn to speak.

It is a very important matter to have secured to us a metal with the threefold quality of efficiency, and the twofold combination herein presented; first, we have the rim plate strong and tenacious, as it is known to be; then it is tinned over, not in the usual mode, but by deposit through the galvanic process, whereby every pore and prominence in the iron plate is completely covered. If a tinned plate done under the old process be examined with a microscope, it will be found to be very imperfectly covered—in fact, the tin is at best a percolating surface, through which the iron may be attacked by oxidizing influences, as, indeed, it commonly is, and so yields to a speedy decay; by this process, however, it is hermetically sealed up, and what is more, attains to greater durability, as the plate is finally coated with zinc upon the tin, by passing it through the heated molten material and rollers working therein; thus we have the three metals, iron, the foundation, and tin and zinc in intimate union.

The appearance of the plates in their completeness is very beautiful, presenting a bright crystalline surface, which is the result of the action of junction between the tin and the zinc. We have seen the articles manufactured in this metal, such as eave spouts, piping, &c., and have been much pleased with them; zinc spouts are a nice article, but they want the strength which the body of this metal secures; in fact, spouts made in this metal may be said to be iron spouts painted two coats, one coat of tin

and one coat of zinc, and this paint laid on by the agency of fire and a power superior to fire. Large troughs, suitable for carrying water through roofs, &c., as well as for the eaves of deep roofs, are provided in this metal, and require little in the way of bearing and fixing; where the span of the trough is large, cross stays are inserted at suitable distances.

Wire trellising of all kinds are also produced in it with obvious advantage, inasmuch as it not only secures the metal from the necessity of painting and its clogging up, but strengthens it by a species of soldering which the deposit of the tin and zinc forms around the joints.

For roof coverings it is applicable with great economy, whether in flat plates with turned up seams or joints, or in the corrugated sheet. We have not yet sufficient experience of its application in this respect, but the testimonials from America, where it has been in use these five years, speak satisfactorily in its favour. In point of economy, it may be observed that the price for the metal laid down, is from 33s. to 46s. per square (of 100 feet); and when it is considered how much flatter the pitch, and how much lighter the rafters may be, it will be readily understood in how many cases it may be applied with advantage. For those who require more particulars, we may refer them to the depot of the patentees, 34, Gracechurch-street, or if they have necessity to write, they may address Mr. Holland, by whom they will be supplied, as we have been, with every information.

CAMBRIDGE CAMDEN SOCIETY.

The thirty-fourth meeting was held at the Philosophical Rooms, Cambridge, on Tuesday, the 5th instant. There was a numerous attendance—fourteen new members were balloted for and elected, among whom was one architect, Francis Bellhouse, Esq., of Manchester. A list of presents, since the last meeting, was read, and thanks recorded to the donors. The report was then presented, the principal points of which are as follows:—

A double number of the *Ecclesiologist* had been published since the last meeting.

No. 5 of the *Notices of Churches in Cambridgeshire and Ely* is nearly ready.

Church notes and brasses had been presented by H. M. and W. B. Faulkner, Esqrs., and were acknowledged.

Regret was expressed, that comparatively few church schemes had been lately received.

Thanks were recorded to Comm. Jones, Esq., for four vols. of the *Ecclesiastical Antiquities of Scotland*.

The committee were busied in selecting designs for churches and a cathedral for the Bishop of New Zealand.

Many subscribers to the *Ecclesiologist* were reported in arrears.

Church plate and ornaments, produced under the superintendence of W. Butterfield, Esq., were recommended and exhibited.

Also several proofs of the elaborate drawings designed to illustrate monastic remains of England, published by Mr. Walters, of Rugeley, were laid on the table.

Owing to an accidental failure in the supply of mosaic tiles, the restoration of St. Sepulchre's had been delayed; the time and cost had outrun the committee's expectations, and yet much of what they had contemplated will remain to be done. Nevertheless, there was ground for congratulation in having rescued "this perishing and most ill-used church from all chance of future violation."

The Rev. Professor Willis then proceeded to explain the use and construction of the Cymograph, designed by him for more accurately obtaining the contours of mouldings; the ingenuity of the contrivance elicited the warm approbation of those assembled. Professor Willis then explained the plan he had adopted for taking the groining of vaults, and his mode of drawing them on paper. The thanks of the meeting were given to the professor for his useful and interesting communications.

The Rev. T. Myers, of Trinity College, detailed the efforts of the Yorkshire Architectural Society (of which he is a member), in the restoration of the ancient stained glass in the churches of York, particularly in that of All Saints, and stated the cases in which success had attended the efforts of the society to

restore a better taste in church architecture in that city.

The Rev. H. Goodwin, M.A., Fellow of Caius College, then read a paper on the orientation of churches, and explained the method he had adopted for marking the orientation accurately. He then proceeded to point out some remarkable instances in which the churches of this town confirmed the suggestion thrown out by the Camden Society of the chance of most churches pointing to that part of the east where the sun rises upon the day of the saint in whose honour the church is dedicated.

WORKHOUSES.

An inquiry of a most painful nature has been carried on in reference to the treatment of some vagrant poorer boys in the Birmingham Workhouse. It has caused a great sensation not only in the town but throughout the country, and quickened the guardians of the poor in their deliberations as to the expediency of erecting a new workhouse. The assistant commissioner, Mr. Weale, who has been conducting the inquiry, observed upon the necessity of much greater accommodation for the poor than they at present possessed, the more particularly as Birmingham was one of the most important districts in the country as regarded the extent and rapid increase of the population. He strongly recommended the guardians, if they determined to build a workhouse, to set about it at once, to select a good site, and, above all, to secure plenty of ground for air and exercise for the aged and the young. Children should have ample opportunity for play and exercise, in order to keep them in health and spirits, for he need not tell them how prejudicial impure air and restraint were to the young. Some gentlemen talked of building a new workhouse on the present site, but his impression was, that the ground upon which the building stood was scarcely large enough for playgrounds for the children. Let them never think of building a workhouse in the midst of a town, on account of the little advantage it gave to gentlemen of looking after the meat that was purchased, and the cooking, while far more important considerations were altogether lost sight of. The commissioner spoke of the Nottingham Workhouse as being one of the best, if not the very best, that he had seen in the kingdom, and said he should be happy to accompany a deputation to visit this place, or any other they might wish to inspect, previous to their finally determining upon building a new workhouse, reminding them at the same time that their plans would still be subject to the approval of the Poor Law Commissioners.

One hundred and nine workhouses were opened up to August last in Ireland; twenty are not yet prepared; total cost, 1,360,000*l.*, or 10*s.* 4*d.* each.

DAVID HAMILTON.

THE following account of the lamented death of one of our most eminent architects will be read with a melancholy pleasure. We extract it from the *Glasgow Citizen*, and tender to its conductors the best thanks of our sorrowing fraternity for their painstaking in this obituary. Although the empire and art has sustained a loss, yet it is a consolation to know that a ripe old age and all its honours had been first achieved. Let the builders, especially workmen, be stimulated by David Hamilton's example, for he set out in life from their ranks; let them read this obituary notice, and gather from it precepts of wisdom, and maxims to guide and regulate their lives. If the workshop could supply leading minds of this class in days of difficult study and acquirement, what may we not hope for now that the path leading to excellence and eminence is smoothed and sidereed.

DEATH OF DAVID HAMILTON, 254, ARCHTREET.

"Our obituary this day contains the name of Mr. Hamilton, the eminent architect. About two years ago, he had an attack of paralysis, from which he never thoroughly recovered; and for some time past he had been in a declining state of health. His death took place at two o'clock, on the morning of Tuesday last, to the deep regret of his numerous